

SECOND MID TERM TEST - 2022

10 - Std

SCIENCE

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Time : 1.30 Hrs

Marks : 50

I Choose the best option

10 X 1 = 10

1. The frequency, which is audible to the human ear is
 a) 50 KHz b) 15000 KHz c) 20 KHz d) 10000 KHz
2. Unit of radio activity is
 a) Roentgen b) Curie c) Becquerel d) all the above
3. In the nuclear reaction ${}_6^{X^{12}} \xrightarrow{\beta \text{ decay}} {}_Z^{Y^A}$, the value of A & Z.
 a) 8, 6 b) 8, 4 c) 4, 8 d) 12, 7
4. Photolysis is a decomposition reaction caused by
 a) heat b) electricity
 c) light d) mechanical energy
5. $Na_2SO_{4(aq)} + BaCl_{2(aq)} \rightarrow BaSO_{4(s)} \downarrow + 2NaCl_{(aq)}$ represents which of the following types of reaction?
 a) Precipitation b) Neutralisation
 c) Combustion d) Single displacement
6. Powdered $CaCO_3$ reacts more rapidly than flaky $CaCO_3$, because of
 a) Large surface area b) High pressure
 c) High concentration d) High temperature
7. The term Ethnobotany was coined by
 a) Khorana b) J.W. Harsbberger
 c) Ronald Ross d) Hugo De Vires
8. Pusa komal is a disease resistant variety of
 a) Sugar cane b) Rice c) Cow pea d) Maize
9. We can cut the DNA with the help of
 a) Scissor b) Knife
 c) Restriction endonucleases d) RNA ase
10. World 'No Tobacco Day' is observed on
 a) May 31 b) June 6 c) April 22 d) October 2

II Answer the following small questions. (any seven)
(Q.No. 20 is compulsory)

7 X 2 = 14

11. True or false (if false give the reason)
 - a) Sound can travel through solids, gases, liquids and even vacuum.
 - b) The velocity of sound is high in gases than solids
12. Name three animals, which can hear ultrasonic vibration.
13. Match the following.

| | | |
|---------------------------------------|---|-----------|
| a) BARC | - | Kalpakkam |
| b) India's first atomic power station | - | Apsara |
| c) IGCAR | - | Mumbai |
| d) First nuclear reactor in India | - | Tarapur |
14. Define Combination reaction. Give one example.
15. How can you determine the age of fossils?
16. Name the types of stem cells.
17. Define genetic engineering.
18. Fill in the blanks. a) Communicable : AIDS. Non - communicable :
 b) Chemotherapy : chemicals. Radiation therapy :
19. How does insulin deficiency occurs?
20. Calculate the amount of energy released when a radio active substance undergoes fusion and results in a mass defect of 2Kg.

III Answer the following questions. (any three)
(Qn. No. 26 is compulsory)

3 X 4 = 12

21. Write the two conditions necessary for hearing echo.
22. Mention four cases in which there is no Doppler effect in sound?
23. Differentiate reversible and irreversible reaction.
24. How HIV is transmitted?
25. Discuss the importance of biotechnology in the field of medicine.
26. Calculate the pH of 1×10^{-4} molar solution of NaOH.

IV Answer the following questions.

2 X 7 = 14

27. Compare the properties of alpha, beta and gamma radiations. **(OR)**
 How does pH play an important role in everyday life?
28. With a neat labelled diagram explain the techniques involved in gene cloning.
(OR) Suggest measures to overcome the problem of an alcoholic.